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Appl. Serial No. 09/992,423
Amendment dated June 2, 2004
Reply to Office Action of March 23, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-5 (cancelled)

6. (withdrawn) A device for growing cells, which device has multiple applications, in particular to the maintenance, proliferation, amplification or differentiation of cells, and includes a closed enclosure (10), microporous membranes (14) delimiting a growth chamber (12) in said enclosure, means (44) for delivering cells to said chamber, means for delivering ventilation gases, nutrient media and growth factors to the enclosure, and means (44) for harvesting cells, characterized in that it further includes containers (28) of different nutrient media or constituents connected by flow rate adjustment means (30) to a delivery manifold (32) of said enclosure, containers (34) of different growth factors connected by flow rate adjustment means (36) to another delivery manifold or the same delivery manifold (38, 32) of the enclosure, and means (52) for controlling the aforementioned adjustment means (30, 36) to determine, as a function of an envisaged application, the composition and/or the flow rate of a mixture of nutrient media and the composition and/or the flow rate of a mixture of growth factors delivered to the enclosure via said delivery manifold or manifolds and to modify said compositions and/or said flow rates as said application proceeds.

7. (withdrawn) A device according to claim 6, characterized in that said manifold or manifolds (32, 38) are connected to said enclosure (10) by a degassing and temperature adjustment chamber (50).

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8. (withdrawn) A device according to claim 6, characterized in that it includes containers (24) for different gases, flow rate adjustment means (26) connecting said containers to a delivery manifold (18) of said enclosure, and means (50) for controlling the adjustment means (26) to determine the composition and the flow rate of a gas mixture delivered to said enclosure as a function of the envisaged application and to modify said composition and/or said flow rate if necessary as the application proceeds.

9. (withdrawn) A device according to claim 6, characterized in that said cells are hematopoietic cells.

10. (currently amended) A method of growing cells, comprising:

- (a) introducing the cells into a closed enclosure;
- (b) supplying at least one ventilation gas to the enclosure;
- (c) supplying from multiple sources of different nutrient media (28) via respective associated adjustable flow adjustment means (30) a mixture of a plurality of different nutrient media to the enclosure at a given composition and flow rate;
- (d) supplying from multiple sources of different growth factors (34) via respective associated adjustable flow adjustment means (36) a mixture of a plurality of different growth factors to the enclosure, said nutrient media and said growth factors being supplied at compositions and flow rates corresponding to an envisaged application; and
- (e) independently modifying the selected flow rates and composition of the mixtures of nutrient media and the mixtures of growth factors,

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respectively, thereby to produce a cell growth of desired maintenance, proliferation, amplification, or differentiation.

11. (currently amended) A method of growing cells as defined in claim 10, and further including:

- (f) providing a plurality of the ventilation gases ~~[[in]]~~ (24) via associated adjustable flow rate means (26) to form a mixture supplied to the enclosure; and
- (g) modifying the composition and flow rate of the ventilation gas mixture.

12. (currently amended) A method of growing cells as defined in claim 10, and further including:

- (f) testing the development of the cells in the enclosure~~[[,]]~~ ~~the modification of~~ and modifying the selected flow rates and compositions of the nutrient media and growth factors ~~being~~ performed as a function of the testing of the cell development.

13. (previously submitted) The method of growing cells as defined in claim 10, wherein the nutrient medium is delivered intermittently to the enclosure.

14. (currently amended) The method of growing cells as defined in claim 10, wherein the cells are ~~hematopoietic~~ hematopoietic cells.